Work Orde September-11-13				*106	\$80 0 *			B AN		Page 1		
Revision ID:	D3027-7			Accept	*N900	040	100)* s	Setup Sta	1.71	S1* S2*	
Start Date: Required Date:	9/11/13 9/11/13	Start Qty: 20.00 Req'd Qty: 20.00	*20 *20	* * 37 *	Cust Item I Customer:	D:						
Reference: Approvals:		n: MLJ	_	•		ate:		R	Run Sta	1/1	R1* R2*	
Sequence ID/ Work Center ID		Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	_
Draw Nbr	Revi	ision Nbr										
D3027	Rev	В										
*100 *100* Waterjet FŁOW CNC Waterje	et		Dwg D3027 GRAIN DIRECTION**	0.00				37	_ O	1	<u>Ae</u> 13.10.	01
110 *4.4.0*		2-Deburr if	necessary	0.00				37	V		Δ	
*11 0 *		Memo		0.00					<u> </u>		13.10.	oi

Quality Control

										DQA:	Date:	
NCR: Yes	/ No				WORK ORDER NON-C	100	NFORI	MANCE / UP		QA Closed:	Date:	
Work Order:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part No. NCR No.					Scrap Machining Small Fa Use-as-is Thermoforming Finishin				Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update		Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process												

Landing	Gear	General		_		_	
	Bending	Bend		Grain		Ovalized	Pressure/Forced
	Centre Not Concentric to O/S	BOM/Route		Hardware		Over/Under tolerance	 Temperature/Cure
	Cracks	Broken/Damaged		Inspection Incomplete		Part Incorrect	Weld
	Crushed/Crimped	Burrs		Instructions Incomplete/Unclear		Part Lost/Missing	 Wrong Stock Pulled
	Cuffs	Contamination		Maintenance		Part Moved	
	Heat Treat	Countersink		Mislabeled		Positioned Wrong	
	Inspection Strip in Tube	Cut Too Short		Misread		Power Loss/Surge	Other
	Ripples in Bend	Drill Holes		Offset			
	Torque Waves in Extrusion	Drawing		Out of Calibration			
	Turning Sequence	Finish		Out of Sequence			
	Wave/Twist in Tube	Folio	Outside Dimensions				

FAULT CATEGORY

Supplier Training Unapproved

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde September-11-1				*106800*									
Item ID: Revision ID: Item Name:	D3027-7			Accept	*N900	040 ′	100*	Setup	Start Stop	*NS1			
Start Date: Required Date: Reference:	9/11/13 9/11/13	Start Qty: 20.00 Req'd Qty: 20.00	*20* *20*	·	Cust Item II Customer:	D :							
Approvals:	Process Plan:QC:		Date:	Tooling: SPC (Y/N):		te:		Run	Start Stop	*NR1	*)*		
Sequence ID/ Work Center II	D	Operation Description QC8- Inspect parts - secon	nd check	Set Up/ Run Hours 0.00	Tool ID		Plan Ad Code Qt	y Qty	y N	Reject Insp Number Star			
120 QC Quality Control		Memo		0.00				(37)	13.10	<u> </u>	9		
130 *130*		NC BRAKE		0.00			3	7			S) (3/10		
Brake NC Brake NC		Memo Deburr if nec	-	0.00							—-()(i°		
140 *1 4 0*		QC5- Inspect part comple	teness to step on W/O	0.00 DAS 27 9-89			2	5 7.					
QC Quality Control		Memo		0.00	3		Q	lne					

											DQA	.: Da	ate:	
NCR: Y	es / No				WORK ORDER NON-C	10:	VFORI	MANCE /	UPDATE		OA Classed			
			· · · · · · · · · · · · · · · · · · ·	-		_			-		QA Closed	i: Da	ate:	
Work Orde	er:				DISPOSITION				AGAI	NST DE	PARTMEN	T/PROCESS		
	lo.				Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube Machining noforming Large Fab	1 -51 107 839	8: S:	47	Water Jet od. Eng. Coor pre/Packaging Supplied		Engineering Quality Other
	<u> </u>	1					••••		10 1 02 1	. 7	: 54	. I		<u> </u>
Root	Date	Step	Qty	-	ption of work order update or Non-conformance		Initial nief Eng	í		•		Verification		QC Inspector
Cause Doc/Data	Date	Steh	Qty		or Non-comormance	Ci	ilei ciig					Vermeatic)	QC ITSPECTOR
Equip/Tooling								ن ا	e. Bang Simelyana antana meranjar ya ya a					
Operator														
Material	_													
Setup														
Other														
Process														
Supplier														
Training								•						
Unapproved												,		
					F.A	VUL	T CATE	GORY						
Landir	ng Gear				General		_				_			
	Bending				Bend		Grain				Ovalized			Pressure/Forced
	Centre N	lot Conce	ntric to (o/s	BOM/Route		Hardwa	re			Over/Unde	r tolerance		Temperature/Cure
	Cracks				Broken/Damaged		Inspecti	on Incomplet	te		Part Incorre	ect		Weld
	Crushed/Crimped Burrs						Instruct	ions Incompl	ete/Unclear	L	Part Lost/N	1issing		Wrong Stock Pulled
	Cuffs				Contamination		Mainte	nance			Part Moved	t		
	Heat Treat				Countersink	L	Mislabe	led			Positioned	Wrong		•
	Inspection	on Strip in	Tube		Cut Too Short		Misread	ļ			Power Loss	/Surge		Other
	Ripples i	n Bend			Drill Holes	Offset								

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

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Work Ord September-11-1				Page 3					
Item ID: Revision ID:	D3027-7			Accept	*N9000	4010		p Start	14.21
Item Name:	Clip						Ċ	Stop	*NS2*
Start Date: Required Date: Reference:	9/11/13 : 9/11/13	Start Qty: 20.00 Req'd Qty: 20.00	*20* *20*		Cust Item ID: Customer:	,	O		
Approvals:	Process Pl	an:	Date:	Tooling:	Date:		Run		*NR1*
	QC:		Date:	SPC (Y/N):	Date:			Stop	*NR2*
Sequence ID/ Work Center I	D	Operation Description	***************************************	Set Up/ Run Hours	Tool ID T	ool # Plan Code			Reject Insp. Number Stamp
150	50 Chemical C		at per QSI005 4.1	0.00			27 °	11	(2 D) []
150 HandFinish Hand Finishing	Š.	Memo	`	0.00			<u> </u>	<i>1</i> (7)	34011
160		QC3- Inspect Part Finish		0.00 27			27		
160 QC Quality Control		Memo		0.00 B/Q L	S		<u> </u>		
170		Identify as per dwg & Sto	ck Location: <u>570</u> 93	3 0.00			マゴノ	DAS	
170 Packaging Packaging		Memo		0.00			<u>97.</u> X.	DAS 28 9-89	10-10-10

. Our order the telephone was the transfer of the transfer and the transfer of the transfer of the transfer of the

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UP	DATE	QA Closed:	Date:	
						1						•	
Work Ord	er:					DISPOSITION		1		AGAINST DI	PARTMENT	/PROCESS	
1						Rework	7		Skid-tube	Crosstube	7	Water Jet	Engineering
Part I	No.					Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	,					Use-as-is	1	Therm	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR	No.				<u>.</u>	Work Order Update			Large Fab	Composite]	Supplier	
Root					Descri	tion of work order update		Initial	Ac	tion	Sign &		
Cause		Date	Step Qty or Non-conformance				Cr	nief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data					•					•			
Equip/Tooling								ļ					
Operator													
Material													
Setup													
Other													
Process			1										
Supplier	<u></u>												
Training													
Unapproved				<u>l </u>									
							AUI	LT CATE	GORY	· · · · · · · · · · · · · · · · · · ·			
Land	ing (1			_	General	_	7		_	¬		7
Bending								Grain			Ovalized	. <u> </u>	Pressure/Forced
!	<u> </u>	Centre Not Concentric to O/S BOM/Route						Hardwa			Over/Under		Temperature/Cure
	Cracks Broken/Damaged						<u> </u>	- 1 '	on Incomplete	_	Part Incorre		Weld
	<u></u>	Crushed/	Crimped		<u> </u>	Burrs	_	-1	ions Incomplete/	Unclear	Part Lost/M	ssing	Wrong Stock Pulled
	<u></u>	Cuffs				Contamination	<u> </u>	Mainte			Part Moved		
	_	Heat Trea	•			Countersink	\vdash	Mislabe			Positioned V	_	7
	Inspection Strip in Tube Cut Too Short							Misread			Power Loss/	Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

Work Ord				*106	3800*						Page 4
Item ID: Revision ID: Item Name:	D3027-7 Clip			Accept	*N900	040	100)* s	Setup Sta	1/1	S1* S2*
•	tart Date: 9/11/13 Start Qty: 2 Required Date: 9/11/13 Req'd Qty: 2 Reference:		*20* *20*		Cust Item I Customer:	D:					• • •
Approvals:	Process P	lan:	Date:		ate:		R	Run Sta Sto	1/1	R1* R2*	
Sequence ID/ Work Center	ID	Operation Description	Wash Order Dalassa	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
1 RN QC Quality Control		QC21- Final Inspection - Memo	work Order Release	0.00				A	a C 5	13-13 MLJ	1370.

		DQA:	Date:	
NCR· Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE			

										QA Closed:	Dat	e:	
Work Orde	er:				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS		
Part N	lo				Rework Scrap Use-as-is Work Order Update	Th	Skid-tul Machini Jermoformi Large Fa	ng ng	Crosstube Small Fab Finishing Composite	i e	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other	
Root			Γ	Descri	ption of work order update	Initia	al I		ction	Sign &			,
Cause	Date	Step	Qty		or Non-conformance	Chief I			cription	Date	Verification	QC Inspector	
Doc/Data	Date	эсер	Qty		or worr comormance	Cinci	-''6		cription	Date	Vermedion	Qe irispector	
Equip/Tooling									:				
Operator													
Material													
Setup													
Other		'											
Process	\dashv												
Supplier	-		<u>'</u>										
Training						1						:	
Unapproved			Ì										
			•	<u> </u>	F	AULT C	ATEGORY				•		•
Landir	ng Gear				General								
[Bending				Bend	Gra	iin			Ovalized		Pressure/Forced	
	Centre N	lot Conce	ntric to	o/s	BOM/Route	Har	dware			Over/Under	tolerance	Temperature/Cure	
	Cracks				Broken/Damaged	Insp	ection Incon	nplete		Part Incorre	ct [Weld	
	Crushed	/Crimped			Burrs	Inst	ructions Inco	mplete/	/Unclear	Part Lost/Mi	issing	Wrong Stock Pulled	
	Cuffs		Contamination			Ma	intenance			Part Moved	_		
	Heat Treat Countersink				Countersink	Mis	labeled			Positioned V	Vrong _	<u></u>	
	Inspection Strip in Tube Cut Too Short				Cut Too Short	Mis	read			Power Loss/	Surge	Other	
	Ripples i	n Bend			Drill Holes	Offset							
	Torque Waves in Extrusion Drawing				Drawing	Out	of Calibratio	วท					
	Turning Sequence Finish				Out	of Sequence	5						
	Wave/Twist in Tube				Folio	Outside Dimensions							

September-11-13 11:43:59 AM

Work Order ID:

106800

Parent Item:

D3027-7

Parent Item Name:

Clip

Start Date: 9/11/13

Required Date: 9/11/13

Start Qty: 20.00

Required Qty: 20.00

Comments:

IPP C05.10.07Added forming step and Issue P/OKJ/JLM IPP Rev:B Now on WaterJet 08-12-08 JLM Verifie Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.050 2024-T3 .050 sheet		Purchased	No			100	sf	141.8920	0.024	0.505264	Ae	13.	(0.01
				Location		Loc Oty	<u>Lo</u>	c Code					
				MAT022		141.892							
				1246	43	141.892			12	1643 -	>	1.0	

											DQA:	Da	te:	
NCR:	Yes	/ No				WORK ORDER NON-C	100	VFOR	MANCE / UPDAT	TE	04.66			
		· ·					-		·		QA Closed:	Da	te:	
Work Orde	er:					DISPOSITION			4	AGAINST DE	PARTMENT,	/PROCESS		
	-					Rework	1		Skid-tube C	rosstube]	Water Jet	П	Engineering
Part N	No.					Scrap	1		├ ─── 	Small Fab	Pro	d. Eng. Coor.	$\boldsymbol{\vdash}$	Quality
	-					Use-as-is			· —	Finishing	Rec/Sto	re/Packaging		Other
NCR I	۷o.					Work Order Update			Large Fab Co	omposite]	Supplier		
					r						r.			
Root			_	_		ption of work order update	1	Initial	Action		Sign &			
Cause		Date	. Step	Qty	(or Non-conformance	Ch	ief Eng	Description	on	Date	Verificatio	n	QC Inspector
Doc/Data	Ш												ı	
Equip/Tooling														
Operator	Ц			· •,	·								l	
Material	Ш												i	
Setup	Ш				Í									
Other														
Process	Ш		·											
Supplier	Ш						l							
Training														
Unapproved														
						F	AUL	T CATE	GORY					
Landi	ng G	iear				General		-			-		_	
	Bending					Bend	L	Grain		<u></u>	Ovalized		Ш	Pressure/Forced
	Centre Not Concentric to O/S					BOM/Route		Hardwa	re		Over/Under	tolerance	Ш	Temperature/Cure
	Cracks					Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct		Weld
		Crushed/	Crimped		L	Burrs		Instruct	ions Incomplete/Uncle	ear	Part Lost/Mi	ssing		Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part Moved		_	

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Positioned Wrong

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio-

DART AEROSPACE LTD	Work Order:	106800
Description: Clip	Part Number:	D3027-7
Inspection Dwg: D3027 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X	First Article		Prototype
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Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.850	+/-0.010	1.854	-		V	JKm -Ul
1.870	+/-0.010	1,854	-		V	
R0.13	+/-0.030	, 13			RG	
		-				
				-		
					, : , : , "	
				 		
			OAS.			

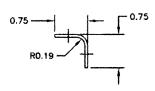
Measured by:	Audited by: 9-89	Prototype Approval:	N/A
Date: 13.(0.0)	Date: 13-10-01	Date:	N/A

F	Rev	Date	Change	Revised by	Approved
	Α	05.04.26	New Issue P/O D350-689-013	KJ/JLM , ,	- 1
	B	06.03.09	Dwg Rev upated; Dimensions revised	KJ/JLM OK	9.11

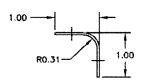


DESIG	RF	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECH	KED	APPROVED ##	DRAWING NO. REV. B
	M	-Ht	D3027 SHEET 1 OF 2
DATE	***************************************		TITLE SCALE
05.0	9.20		CLIP 1:2
Α		01.05.18	NEW ISSUE
æ		05.09.20	REMOVE HOLES FROM -7

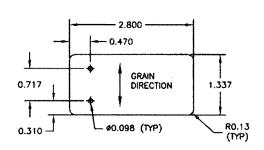




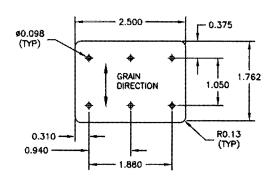
D3027-1 BEND DETAIL



D3027-3 BEND DETAIL



03027-1 FLAT PATTERN (0.063" SHEET)



D3027-3 FLAT PATTERN (0.050" SHEET)

NOTES:

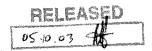
- 1) BREAK ALL UNMARKED SHARP CORNER 0.010 TO 0.020
- 2) MATERIAL: 2024-T3 (QQ-A-250/4)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED 5

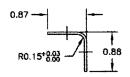
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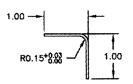


DESIGN RF	DRAWN BY		OSPACE LTD ONTARIO, CANADA
CHECKED A	APPROVED AN	DRAWING NO.	REV. B
-HT	#	D3027	SHEET 2 OF 2
DATE	***************************************	TITLE	SCALE
05.09.20		CLIP	1:2

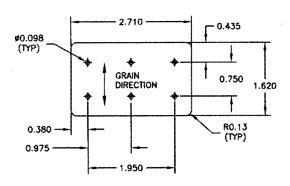




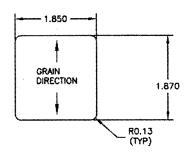
D3027-5 BEND DETAIL



D3027-7 BEND DETAIL



D3027-5 FLAT PATTERN (0.050" SHEET)



03027-7 FLAT PATTERN (0.050" SHEET)

NOTES:

- 1) BREAK ALL UNMARKED SHARP CORNER 0.010 TO 0.020
- 2) MATERIAL: 2024-T3 (QQ-A-250/4)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED